REMARKS

Applicants respectfully request reconsideration of the present application.

Claims 19-26 are pending in the present Application. In the above amendments, claims 1-18 are cancelled, and claims 27-42 have been added. These amendments are fully supported throughout the specification. Thus, after entry of the present Amendment, claims 19-42 will be pending.

Applicants believe that the present Application is now in condition for allowance, which prompt and favorable action is respectfully requested.

A.   Rejections under 35 USC 103(a)—Claims 19-23

The Examiner has rejected claims 19-23 under 35 USC 103(a) as being obvious over Wiedeman (US 6,253,080) in view of Wiedeman (US 6,654,357). Applicants respectfully traverse this rejection, as there is no combination of the cited references that discloses or suggests all of the recited subject matter.

(i) No disclosure or suggestion of "monitoring an auxiliary paging channel after activating said deep paging mode"

The recited subject matter of claims 19-23 is not obvious over the cited references, as in any combination, the cited references do not disclose or suggest, at least, the recited subject matter of a method for compensating for the Doppler effect in a communication system where messages are transmitted at a low data rate to a user terminal that is inside a building, including "monitoring an auxiliary paging channel after activating said deep paging mode."

To reject claims in an application under §103, an examiner must establish a *prima facie* case of obviousness. A *prima facie* case of obviousness is established by a showing of three basic criteria. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations.[1] The teaching or suggestion to make the claimed combination and the

---

[1] *See* MPEP §706.02(j).

reasonable expectation of success must both be found in the prior art and not based on applicant's disclosure.[2]

The Examiner recognizes that the '080 patent "is silent" with respect to the recited "monitoring an auxiliary paging channel after activating said deep paging mode."[3] Thus, according to the Examiner's own admission, the recited subject matter clearly differentiates over the prior art.

Applicants submit that despite the Examiner's allegations, the addition of the '357 patent does NOT make up for this deficiency of the '080 patent. In fact, the '357 also fails to disclose or suggest the above-noted recited subject matter.

In an attempt to cure the deficiency of the '080 patent, the Examiner cites to a portion of the '357 patent that generally discusses a paging channel, and the Examiner then concludes that "[t]his clearly suggests that the user terminal monitors the paging channel for acquisition, activation, configuration of the paging channel, registration parameters and parameters such as activation of page mode."[4] Applicants respectfully submit, however, that the disclosure cited by the Examiner does not relate to the recited subject matter of the claim. The cited disclosure is a general discussion of a paging channel. The citation does not disclose or suggest an "auxiliary paging channel," nor does the citation disclose or suggest a "deep paging mode." As such, without any supporting disclosure, Applicants submit that the Examiner has relied on the use of hindsight in constructing his conclusion regarding the teaching provided by the '357 patent. In essence, the Examiner is basing the rejection on the assertion that it would have been obvious to do something not suggested in the art because so doing would provide advantages stated in Applicants specification. This sort of rationale has been condemned by the CAFC.[5] Thus, the '357 patent also fails to disclose or suggest "monitoring an auxiliary paging channel after activating said deep paging mode," as recited by the present claims.

Therefore, the combination of the cited references fails to teach or suggest all of the recited subject matter.

---

[2] *See In re Vaeck,* 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).
[3] Office Action mailed March 23, 2007, page 3, line 3.
[4] Office Action at p. 3, lines 9-11.
[5] *See, e.g., Panduit Corp. v. Dennison Manufacturing Co.,* 1 USPQ2d 1593 (Fed. Cir. 1987).

(ii) No disclosure or suggestion of "tracking Doppler as the user terminal proceeds into the building"

Alternately, or in addition, the recited subject matter of claims 19-23 is not obvious over the cited references, as in any combination, the cited references do not disclose or suggest, at least, the recited subject matter of a method for compensating for the Doppler effect in a communication system where messages are transmitted at a low data rate to a user terminal that is inside a building, including "tracking Doppler as the user terminal proceeds into the building."

The Examiner alleges that the '080 patent discloses "tracking Doppler as the user terminal proceeds into the building," as recited by the claims, however, the "Doppler correction" or "Doppler pre-correction" cited by the Examiner is performed by virtual gateway 1108 *"to compensate for motion of the satellite" relative to virtual gateway 1108*, and is not related to the recited user terminal proceeding into the building, as recited.[6] In particular, the Examiner cites to a portion of the '080 patent that is discussing virtual gateway 1108. Virtual gateway 1108 is a network component of the system, which is different from mobile terminal 1106.[7] Specifically, the cited disclosure of the '080 patent is referring to the processing of "signals [that] arrive at the antenna 1500 [of virtual gateway 1108] from the satellite 10. . . . and Doppler corrected in block 1510."[8] Further, on the transmit side, the '080 patent discloses using a component called a "Doppler pre-corrector 1530."[9] As such, the '080 patent is discussing signal processing, on both the transmit side and the receive side, of virtual gateway 1108. Virtual gateway 1108 of the '080 patent is not a user terminal. Further, the '080 patent does not disclose or suggest any tracking of Doppler related to a user terminal proceeding into a building. Thus, the '080 patent does not disclose or suggest "tracking Doppler as the user terminal proceeds into the building," as recited by the claims.

Therefore, the combination of the cited references fails to teach or suggest all of the recited subject matter.

(iii) No disclosure or suggestion of "placing the user terminal into a deep paging mode prior to the user terminal entering the building"

Alternately or in addition, the recited subject matter of claims 19-23 is not obvious over the cited references, as in any combination, the cited references do not disclose or suggest, at

---

[6] '080 patent at col. 27, lines 10-11.
[7] *See, e.g., Id.* at Figs. 17 and 18.
[8] *Id.* at col. 27, lines 6-10.
[9] *Id.* at col. 27, lines 30-34.

least, the recited subject matter of a method for compensating for the Doppler effect in a communication system where messages are transmitted at a low data rate to a user terminal that is inside a building, including "placing the user terminal into a deep paging mode prior to the user terminal entering the building."

In the Office Action, the Examiner *alleges* that the '080 patent teaches the above-noted recited subject matter by stating that "*before* the user moves indoors, the gateway embodied in the satellite interface unit or virtual gateway delivers a paging mode, messaging, low speed data to the mobile terminals, see col. 7, lines 60 to col. 8, lines 15" (emphasis added).[10] The Applicants respectfully submit that on its face, the cited portions of the '080 patent do not disclose or suggest the above-noted subject matter, and further that the Examiner is misconstruing the disclosure of the reference in an attempt to obviate the recited subject matter.

Rather than disclosing "placing the user terminal in a deep paging mode *prior* to the user terminal entering the building," as recited by the present claims, *the '080 patent clearly only contemplates taking action after the user, who has moved indoors, is not able to be contacted.* In particular, the '080 patent states that a user, previously "in contact with the system for some period of time and . . . registered as a mobile user at gateway 76 . . . then moves indoors."[11] After the user moves indoors, the '080 patent admits that "the mobile terminal cannot receive the paging messages."[12] *Notably, the '080 patent does not disclose or suggest that any action is taken at the user terminal prior to moving indoors.*

Instead, the '080 patent states that

> [T]he system, *after some number of attempts to reach the mobile terminal 1106*, forms a message at the gateway 76, and transmits the message to the appropriate Satellite Interface Trunk Unit 1207 and thence to the Paging/Broadcast System 1112. The Paging/Broadcast System 1112 is sited in a good location (e.g., the top of a mountain or some other high place). The Paging/Broadcast System 1112 in turn broadcasts the paging message on a frequency (typically a lower frequency) which is able to penetrate the building successfully. The mobile user terminal 1106, with an appropriate receiver capable of tuning to the lower frequency either automatically or on demand from the user, thence is notified that a call is waiting. *The mobile user, thus alerted*, can move to a location, (e.g. outdoors or near a window) where the paging message can be responded to and the incoming call connected.[13]

---

[10] Office Action at p. 2, item #2, lines 12-14.
[11] '080 patent at col. 8, lines 10-13.
[12] *Id.* at col. 8, lines 13-16.
[13] *Id.* at col. 8, lines 16-32.

Thus, the '080 patent does not disclose or suggest *"placing the user terminal in a deep paging mode **prior*** to the user terminal entering the building," as recited by the present claims.

The Examiner attempts to argue that the disclosure of delivering "a paging mode, messaging, low speed data to the mobile terminals" comprises a disclosure of the recited subject matter, however, such disclosure is made in a general statement regarding "[o]ne application of the distributed gateway embodied in the satellite interface unit or virtual gateway 1108."[14] This general discussion does not disclose or suggest a deep paging mode, nor any timing with respect to activating a deep paging mode, such as prior to entering a building. As noted above, the cited portion of the '080 patent further describes the details of the process of the '080 patent, which as discussed above does not suggest any action occurring on the user terminal prior to entering a building. Once again, the Examiner is basing the rejection on the assertion that it would have been obvious to do something not suggested in the art because so doing would provide advantages stated in Applicants specification, and such a rationale has been condemned by the CAFC.[15] Thus, the '080 patent does not disclose or suggest "placing the user terminal in a deep paging mode **prior** to the user terminal entering the building," as recited by the present claims.

Further, the Examiner does not allege that the '357 patent makes up for this deficiency.

Therefore, the combination of the cited references fails to teach or suggest all of the recited subject matter.

Thus, based on the above remarks, Applicants respectfully request that the Examiner withdraw the rejection of claims 19-23 under 35 USC 103(a) as being obvious over Wiedeman (US 6,253,080) in view of Wiedeman (US 6,654,357).

B.   *Rejections under 35 USC 103(a)—Claims 24-26*

The Examiner has rejected claims 24-26 under 35 USC 103(a) as being obvious over Wiedeman (US 6,654,357) in view of Wiedeman (US 6,253,080). Applicants respectfully traverse this rejection, as there is no combination of the cited references that discloses or suggests all of the recited subject matter.

---

[14] *Id*. at col. 7, line 65 to col. 8, line 2.
[15] *See, e.g., Panduit Corp. v. Dennison Manufacturing Co.*, 1 USPQ2d 1593 (Fed. Cir. 1987).

11

No disclosure or suggestion of "determining Doppler based on said location and said ephemeris messages stored in the user terminal"

The recited subject matter of claims 24-26 is not obvious over the cited references, as in any combination, the cited references do not disclose or suggest, at least, the recited subject matter of a method including "determining Doppler based on said location and said ephemeris messages stored in the user terminal."

To reject claims in an application under §103, an examiner must establish a *prima facie* case of obviousness. A *prima facie* case of obviousness is established by a showing of three basic criteria. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations.[16] The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art and not based on applicant's disclosure.[17]

Contrary to the Examiner's allegation, the recited subject matter of "determining Doppler based on said location and said ephemeris messages stored in the user terminal" is not disclosed by the '357 patent. In particular, the Examiner alleges that the '357 patent discloses that "the Doppler is determined and compensated for attenuation based on the location stored in the user terminal, see col. 13, lines (sic) 41 to col. 14, lines (sec) 62."[18] **In constructing this interpretation of the reference, the Examiner appears to be using impermissible hindsight, as the reference in fact does not provide any such teaching.** In particular, the reference recites

> The user terminal location can be determined in several ways. By example, the user terminal 13 can send to the system 10 the location information by way of an operator-entered code (e.g., 01=urban, 02=rural, 03=water, etc.). Also by example, the user terminal location can be output from a position location subsystem 90, such as GPS, LORAN or some other device which calculates the user's location. Also by example, the system can locate the user terminal by ranging or triangulation using signals from the constellation of satellites 12.[19]

---

[16] *See* MPEP §706.02(j).
[17] *See In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).
[18] Office Action at p. 5, lines 2-3.

> It is also within the scope of the invention to employ *real-time or substantially real-time weather information, such as that provided by Doppler radar, in determining diversity for a given user terminal.* By example, and depending upon the RF frequencies in use, user terminals that are known to be located within rain cells within the gateway 18 coverage area, as determined from Doppler radar images of the gateway 18 coverage area, may have their diversity level increased over those terminals not currently located within a rain cell.[20]

Thus, as is evident from a careful reading of the cited reference, the '357 patent is referring to *determining diversity* for a user terminal based on *weather information*, for example *provided by* Doppler radar. The cited reference does not disclose or suggest any determination of Doppler, nor does the cited reference disclose or suggest any use of ephemeris data. Therefore, the cited reference cannot disclose or suggest a determination of the Doppler based on the location and ephemeris data stored in the user terminal.

Thus, this teaching of the '357 patent does not have anything to do with a "method for compensating for the Doppler effect in a communication system where messages are transmitted at a low data rate to a user terminal that is inside a building, comprising . . . determining Doppler based on said location and said ephemeris messages stored in the user terminal," as recited by the present claims.

As such, the Examiner's allegation of the teaching of the '357 patent is not supported by the disclosure of the '357 patent, and as such the Examiner's allegation appears to be based on the impermissible use of hindsight.

The Examiner attempts to cure the deficiencies of the '357 patent by alleging that the '080 patent "discloses of compensating for the Doppler effect in a communication where messages are transmitted at a low data rate inside a building [see, fig. 18, col. 7, lines (sic) 60 to col. 8, lines (sic) 35 and col. 27., lines 5-47."[21] Again, the Examiner appears to be using impermissible hindsight, as such a teaching is not found in the cited reference.

In particular, as discussed in detail in the above remarks regarding claims 19-23, the '080 patent generally discloses that "[o]ne application of the distributed gateway embodied in the satellite interface unit or virtual gateway 1108 is the delivery of . . . low speed data . . . by the use of other terrestrial systems."[22] Further, the '080 patent discloses signal processing, on both the

---

[19] US 6,654,357 to Wiedeman, col. 13, lines 42-51.
[20] *Id.* at col. 14, lines 18-27.
[21] Office Action at p. 5, lines 8-10.
[22] '080 patent at col. 7, line 65 to col. 8, line 2.

transmit side and the receive side, of virtual gateway 1108.[23] As such, *while the '080 patent may mention the terms "low speed data" and "Doppler," there is no connection between the two terms in the '080 patent.*

Further, the '080 patent does not disclose or suggest storing of location and ephemeris data in the user terminal. As such, the '080 patent cannot disclose or suggest "determining Doppler based on said location and said ephemeris messages stored in the user terminal," as recited by the present claims.

Therefore, the combination of the cited references fails to teach or suggest all of the recited subject matter.

Thus, based on the above remarks, Applicants respectfully request that the Examiner withdraw the rejection of claims 24-26 under 35 USC 103(a) as being obvious over Wiedeman (US 6,654,357) in view of Wiedeman (US 6,253,080).

C.   New Claims 27-42

Applicants have added new claims 27-42 to recite subject matter to which they are entitled. These claims are fully supported throughout the specification.[24] Further, these new claims further define previously presented claim elements, and thus no new issues are raised.

Claims 27 depends from claim 19, and thus is allowable over the cited references for at least the same reasons as discussed above.

Additionally, claim 27 recites subject matter not disclosed or suggested by any combination of the cited references. In particular, claim 27 recites that "the monitoring occurs based on the Doppler tracked by the user terminal." As noted in the remarks above, none of the cited references discloses or suggests "Doppler tracked by the user terminal," as recited. The references do mention the term "Doppler," but only in reference to weather information for determining diversity, or in reference to the network component of a virtual gateway 1108 and not with respect to the user terminal. Further, there is no disclosure or suggestion that tracked Doppler can be used as the basis for monitoring an auxiliary paging channel. Thus, the combination of the cited references fails to teach or suggest all of the recited subject matter of claim 27.

---

[23] *Id*. at col. 27, lines 5-38.
[24] *See, e.g.*, Specification at paragraphs 39, 40 and 86-90.

Further, claim 28 depends from claim 24, and thus is allowable over the cited references for at least the same reasons as discussed above.

Also, claim 28 recites subject matter not disclosed or suggested by any combination of the cited references. In particular, claim 28 recites that "the acquiring occurs based on the Doppler determined by the user terminal." As noted in the remarks above, none of the cited references discloses or suggests "Doppler determined by the user terminal," as recited. The references do mention the term "Doppler," but only in reference to weather information for determining diversity, or in reference to the network component of a virtual gateway 1108 and not with respect to the user terminal. Further, there is no disclosure or suggestion that Doppler is determined by a user terminal, and then used as the basis for acquiring a pilot signal. Thus, the combination of the cited references fails to teach or suggest all of the recited subject matter of claim 28.

Independent claims 29, 30 and 31 respectively recite at least one processor, an apparatus, and a user terminal, and these claims are based on independent claim 19. Thus, for at least the same reasons as discussed above with respect to claim 19, these claims are also allowable.

Claims 32-36, which depend from claim 31, are respectively based on pending claims 20-23 and 27, and are thus allowable over the cited references for at least the same reasons as discussed above.

Independent claims 37, 38 and 39 respectively recite at least one processor, an apparatus, and a user terminal, and these claims are based on independent claim 24. Thus, for at least the same reasons as discussed above with respect to claim 24, these claims are also allowable.

Claims 40-42, which depend from claim 39, are respectively based on pending claims 25, 26 and 28, and are thus allowable over the cited references for at least the same reasons as discussed above.

CONCLUSION

In light of the amendments contained herein, Applicants submit that the application is in condition for allowance, for which early action is requested.

Please charge any fees or overpayments that may be due with this response to Deposit Account No. 17-0026.

Respectfully submitted,

Dated June 25, 2007
:   _____

By: /Abdollah Katbab/

_____

Abdollah Katbab
Reg. No. 45,325
(858) 651-4132

QUALCOMM Incorporated
Attn: Patent Department
5775 Morehouse Drive
San Diego, California 92121-1714
Telephone: (858) 658-5787
Facsimile: (858) 658-2502